



SGSO

Address: LIT by CARDI

Client:

LumCAT: 0017440226 KAI 11.6W 3000K 1400lm

Luminaire:

Report No:

Voltage(V): 230.4500

Test No: KYZ-A251030009-03-002

Current(A): 0.0525

LampCAT: LED

Power (W): 11.6000

Lamp flux(lm): -1.0

PF: 0.9592

Number of Lamps: 1

Ballast type:

Length(mm): -178

Width(mm): -178

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1400.00

Efficiency(%): 100.00%

Lumens(lm)/Power(W): 120.69

Central intensity(cd): 684.437

Maximum intensity(cd): 696.857

Angle of maximum intensity: C=45.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=86.8

[C90/270]Total=86.4

Field angle(10%Imax): [C0/180]Total=145.3

[C90/270]Total=147.0

Maximum s/h(1/2): C0_180=1.15 C90_270=1.07

Maximum s/h(1/4): C0_180=1.21 C90_270=1.17

Up flux rate of lamp(%): 0.77%

Down flux rate of lamp(%): 99.23%

Up flux rate of LUM(%): 0.77%

Down flux rate of LUM(%): 99.23%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 86.191%

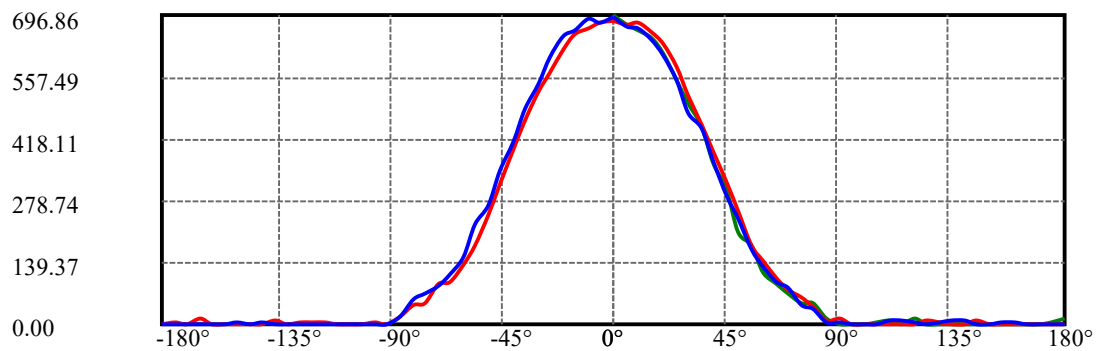
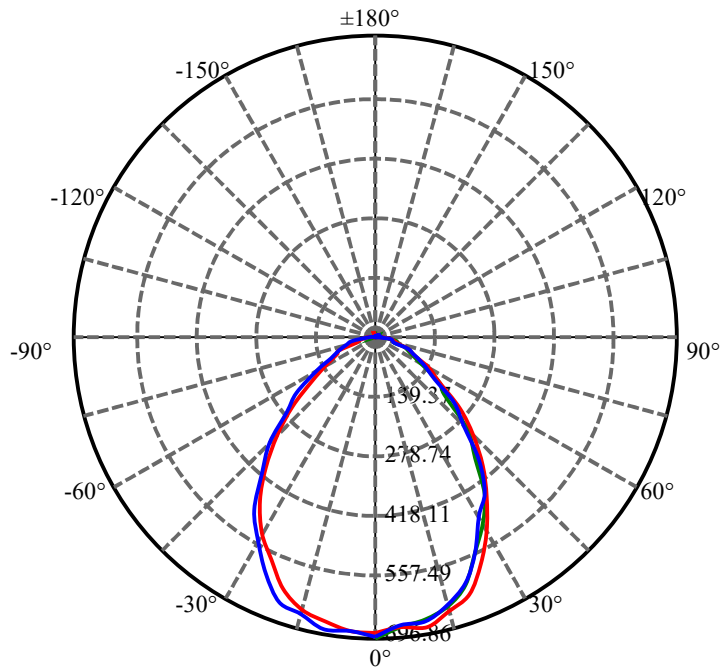
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	664.958	0.000	0	.000%	.000%
5.0	649.824	16.354	16.354	.000%	1.168%
10.0	646.200	48.239	64.593	.000%	4.614%
15.0	629.680	78.747	143.34	.000%	10.239%
20.0	602.342	105.645	248.985	.000%	17.785%
25.0	554.168	126.205	375.19	.000%	26.799%
30.0	494.855	138.127	513.316	.000%	36.666%
35.0	440.179	143.262	656.579	.000%	46.899%
40.0	373.939	141.326	797.905	.000%	56.993%
45.0	303.116	130.435	928.34	.000%	66.310%
50.0	232.186	112.543	1040.883	.000%	74.349%
55.0	175.965	92.337	1133.22	.000%	80.945%
60.0	129.443	73.451	1206.671	.000%	86.191%
65.0	94.378	56.613	1263.283	.000%	90.235%
70.0	77.591	45.306	1308.589	.000%	93.471%
75.0	54.143	35.826	1344.415	.000%	96.030%
80.0	38.796	25.874	1370.29	.000%	97.878%
85.0	13.056	14.660	1384.949	.000%	98.925%
90.0	1.919	4.266	1389.215	.000%	99.230%
95.0	0.746	0.759	1389.974	.000%	99.284%
100.0	0.959	0.482	1390.456	.000%	99.319%
105.0	1.439	0.668	1391.124	.000%	99.366%
110.0	2.665	1.116	1392.24	.000%	99.446%
115.0	1.492	1.095	1393.335	.000%	99.524%
120.0	3.357	1.227	1394.562	.000%	99.612%
125.0	1.972	1.282	1395.843	.000%	99.703%
130.0	1.812	0.856	1396.699	.000%	99.765%
135.0	2.185	0.840	1397.54	.000%	99.825%
140.0	1.492	0.708	1398.248	.000%	99.875%
145.0	1.652	0.546	1398.794	.000%	99.914%
150.0	0.533	0.335	1399.129	.000%	99.938%
155.0	1.013	0.203	1399.332	.000%	99.953%
160.0	0.853	0.204	1399.536	.000%	99.967%
165.0	1.705	0.219	1399.755	.000%	99.983%
170.0	0.426	0.132	1399.887	.000%	99.992%
175.0	1.066	0.056	1399.942	.000%	99.996%
180.0	3.198	0.053	1399.995	.000%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	513.32	N.A.	36.67%
0-40	797.90	N.A.	56.99%
0-60	1206.67	N.A.	86.19%
0-90	1389.22	N.A.	99.23%
0-120	1394.56	N.A.	99.61%
0-180	1400.00	N.A.	100.00%
60-90	256.00	N.A.	18.29%
90-120	9.61	N.A.	0.69%
90-130	11.75	N.A.	0.84%
90-150	14.18	N.A.	1.01%
90-180	14.99	N.A.	1.07%
0-54.28	1120.00	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	64.59
10-20	184.39
20-30	264.33
30-40	284.59
40-50	242.98
50-60	165.79
60-70	101.92
70-80	61.70
80-90	18.93
90-100	1.24
100-110	1.78
110-120	2.32
120-130	2.14
130-140	1.55
140-150	0.88
150-160	0.41
160-170	0.35
170-180	0.06



C45(Max): —————

C0/C180: —————

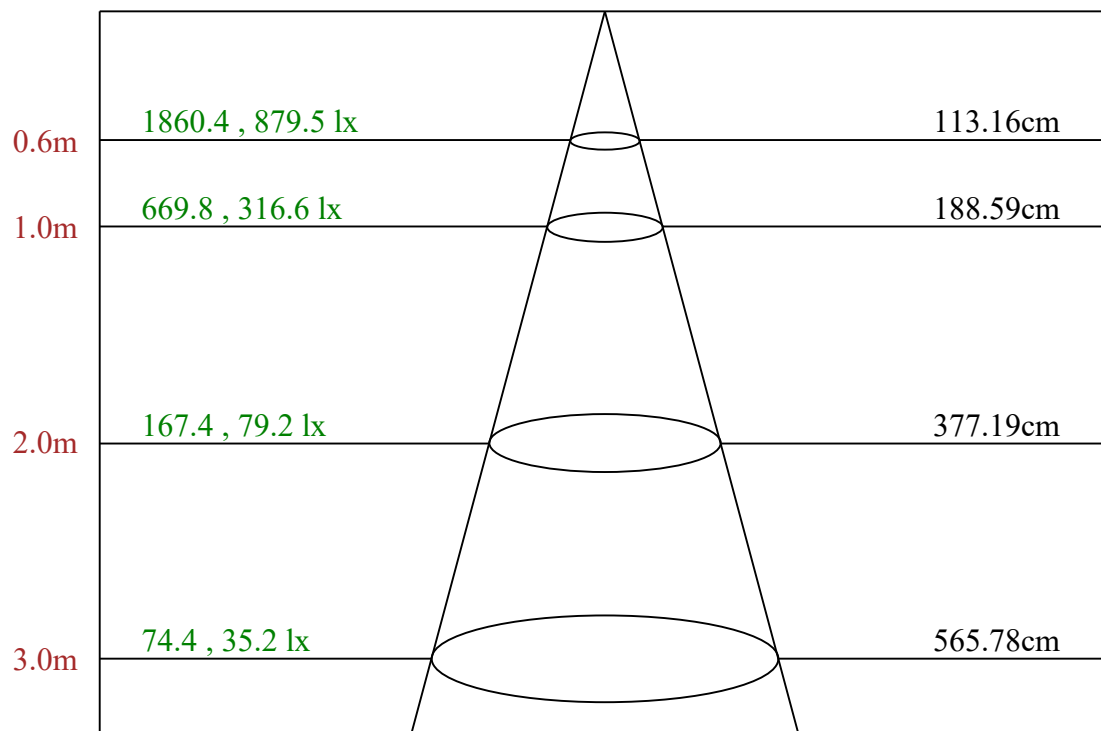
C90/C270: —————

Field angle(10%Imax):C0/180Left:72.4 Right:72.9

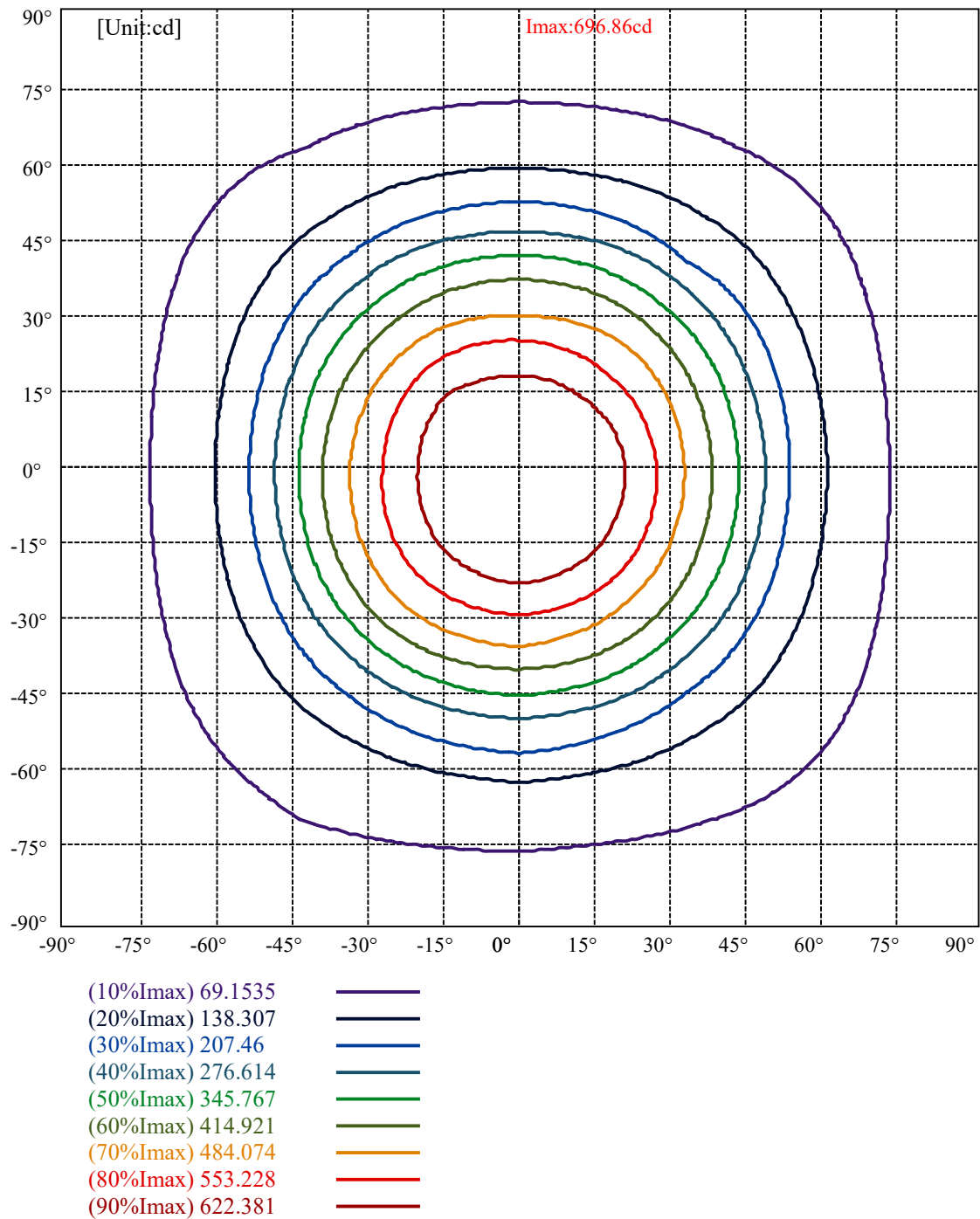
:C90/270Left:75.4 Right:71.6

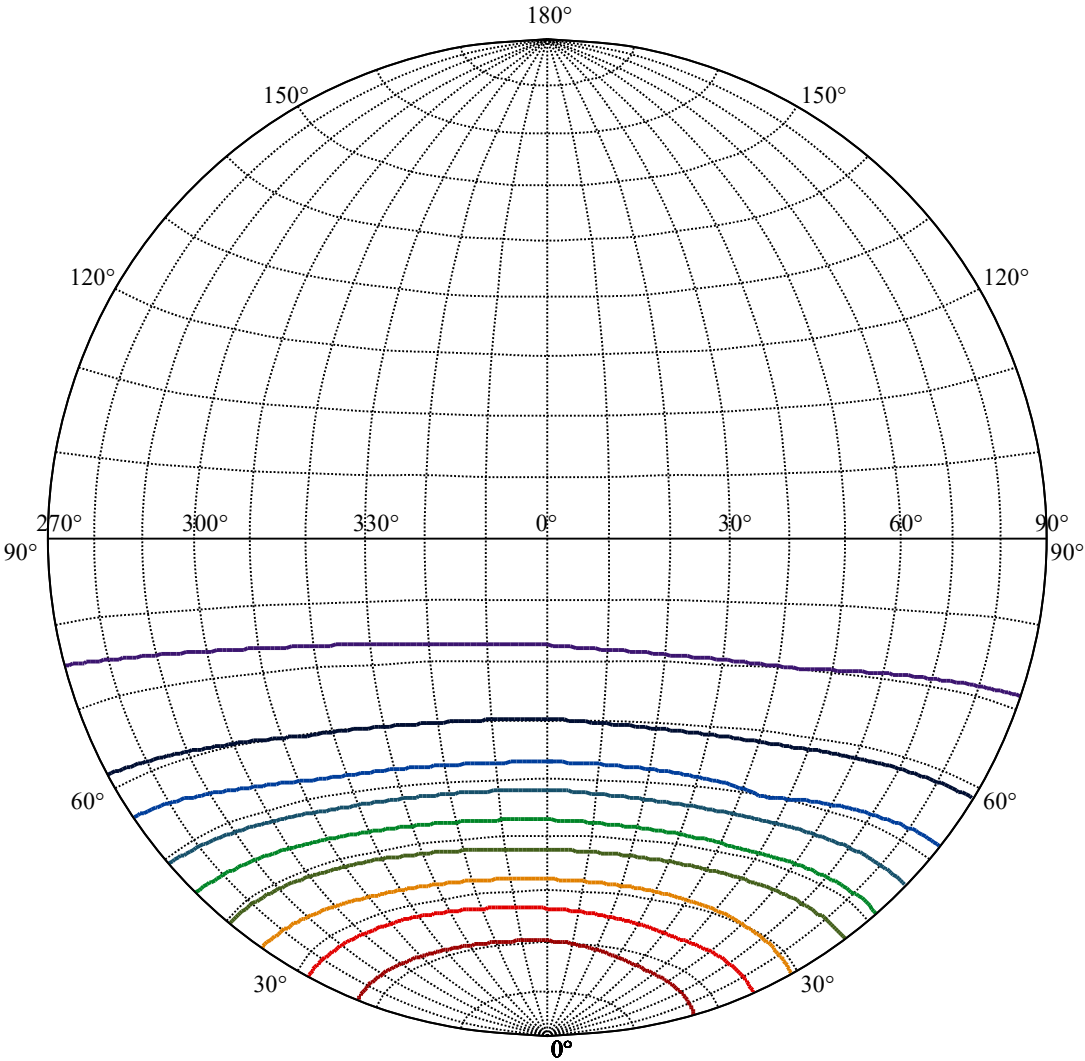
Beam Angle(50%Imax):C0/180Left:43.4 Right:43.4

:C90/270Left:44.9 Right:41.5



Max , Ave Beam angle of C45 plane 86.64



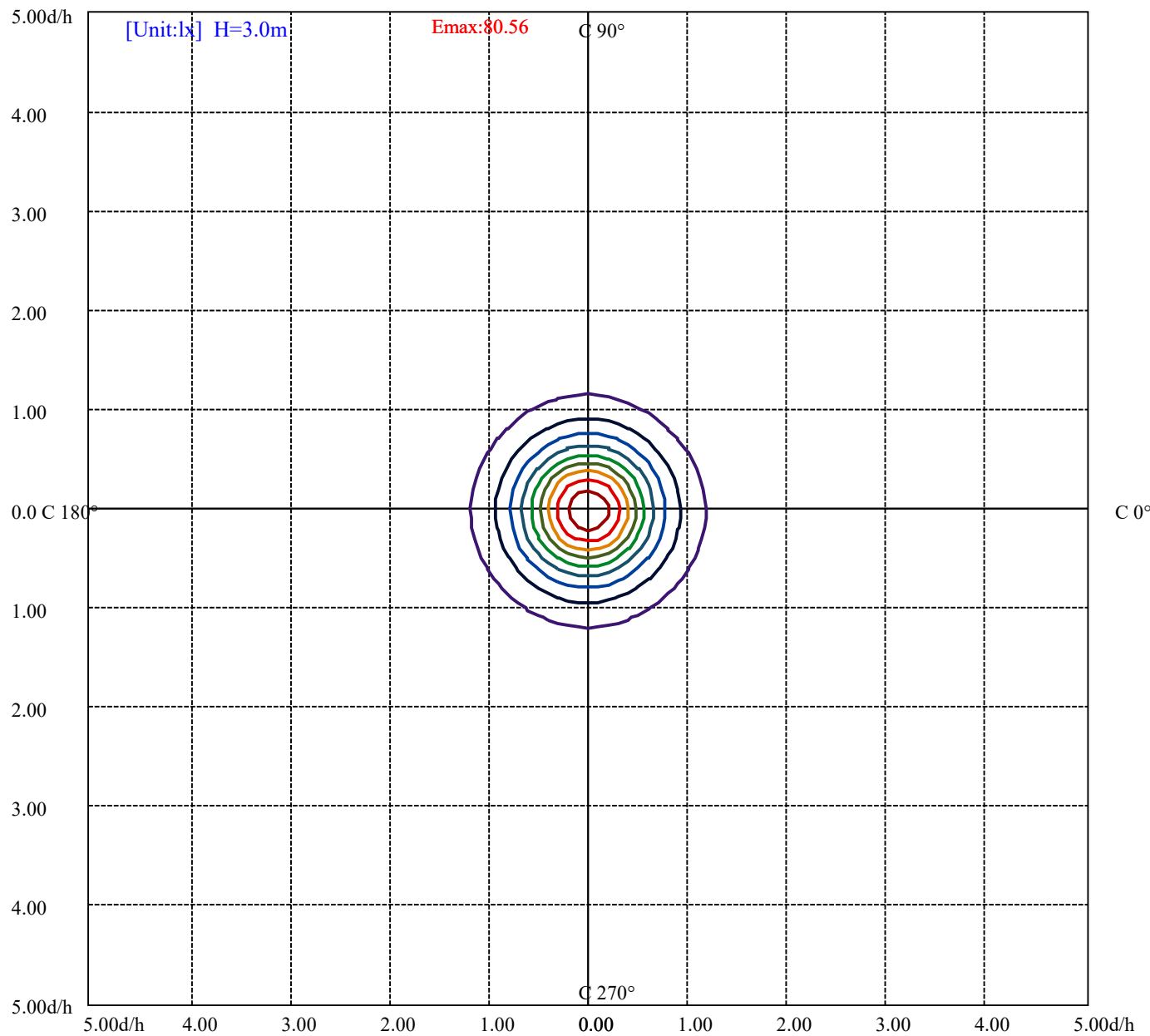


House

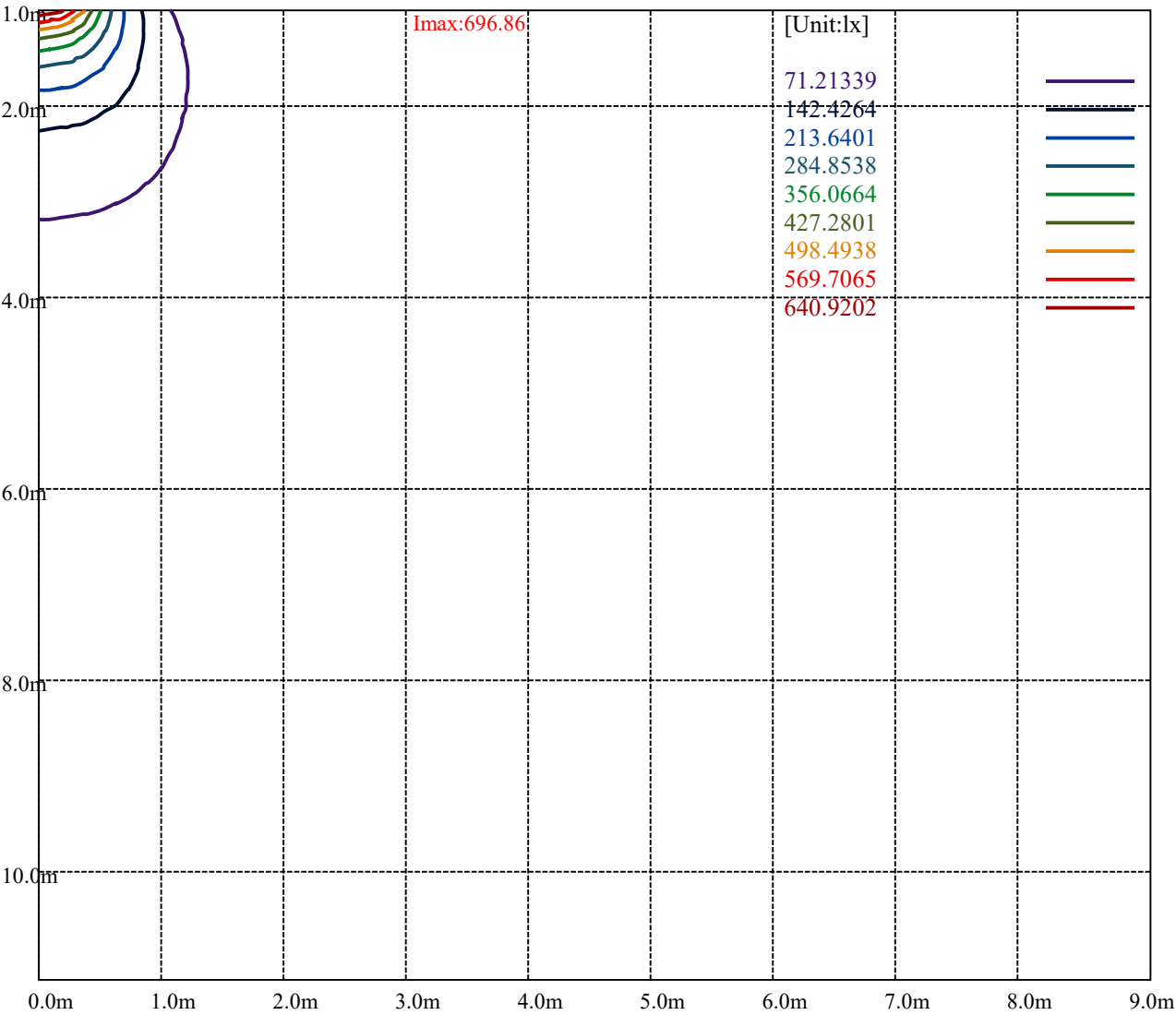
[Unit:cd]

Road

I _{max} :696.86	
(10%I _{max}) 72.50565	
(20%I _{max}) 145.0109	
(30%I _{max}) 217.5168	
(40%I _{max}) 290.0228	
(50%I _{max}) 362.5277	
(60%I _{max}) 435.0337	
(70%I _{max}) 507.5396	
(80%I _{max}) 580.0446	
(90%I _{max}) 652.5505	



(10%Emax)	8.056171	—
(20%Emax)	16.11232	—
(30%Emax)	24.16854	—
(40%Emax)	32.22464	—
(50%Emax)	40.28086	—
(60%Emax)	48.33696	—
(70%Emax)	56.39318	—
(80%Emax)	64.44939	—
(90%Emax)	72.50549	—



Luminance Table

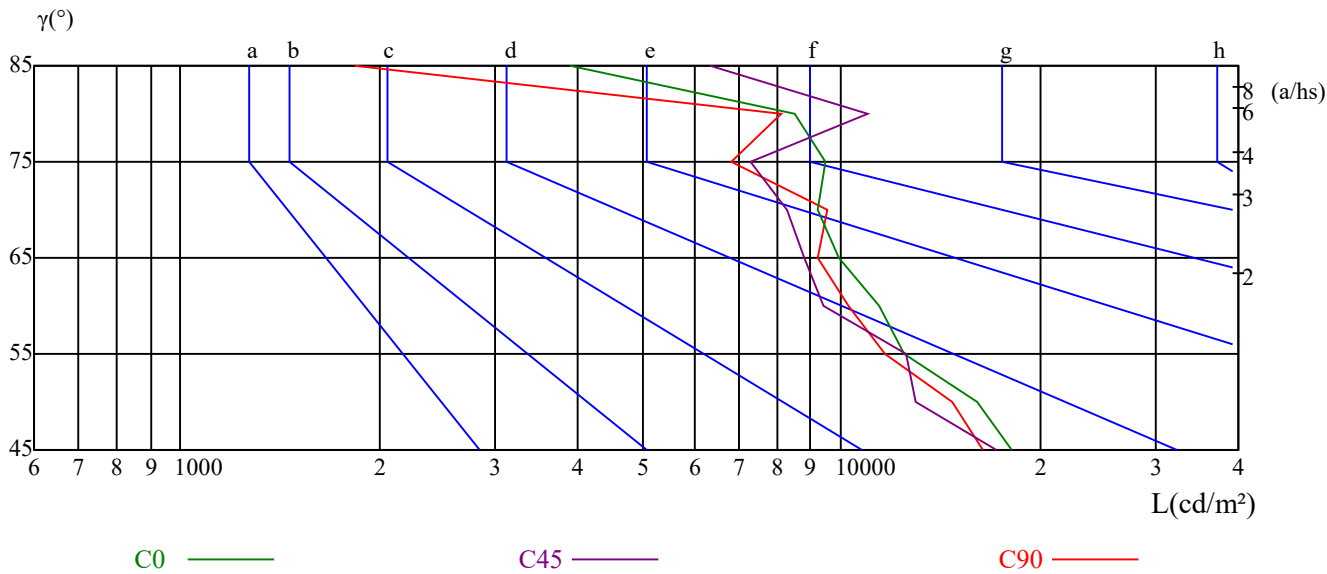
γ	45	50	55	60	65	70	75	80	85
C0	18201	16056	12462	11444	9954	9225	9504	8520	3886
C45	17167	12978	12555	9412	8815	8287	7300	10984	6340
C90	16386	14753	11685	10303	9237	9538	6818	8110	1841

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
9553	9996	8900	8299	8884	8902	6136	4499	7209

Glare Table

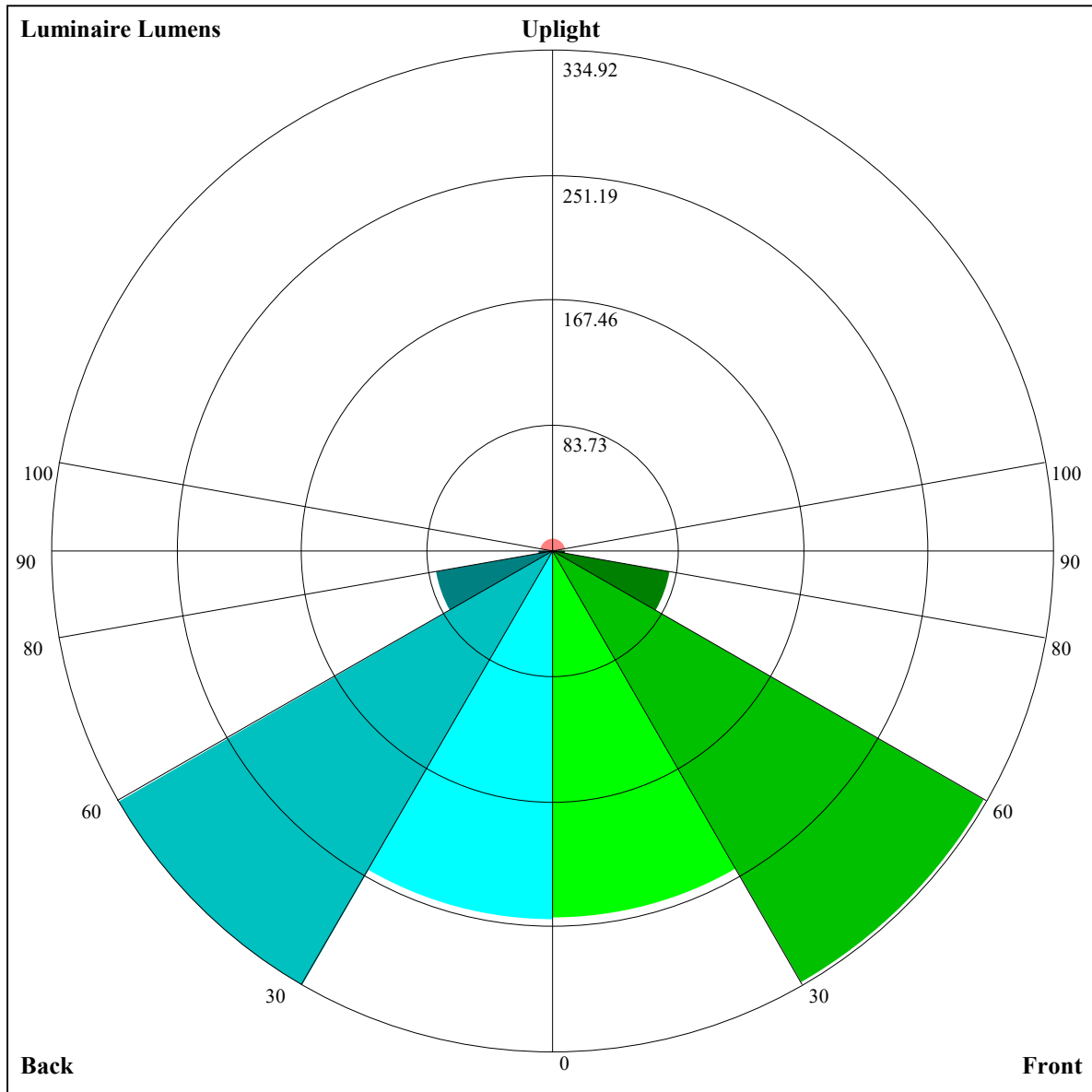
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve



Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	15.52	16.98	15.89	17.31	17.64	15.20	16.65	15.57	16.98	17.32
	3H	16.58	17.89	16.98	18.25	18.61	16.31	17.62	16.71	17.98	18.34
	4H	17.09	18.31	17.49	18.68	19.06	16.68	17.91	17.09	18.27	18.66
	6H	17.55	18.68	17.97	19.07	19.48	17.07	18.21	17.49	18.59	19.00
	8H	17.65	18.75	18.08	19.14	19.56	17.17	18.26	17.59	18.65	19.07
	12H	17.66	18.71	18.09	19.11	19.54	17.15	18.20	17.58	18.60	19.03
4H	2H	15.87	17.09	16.27	17.46	17.84	15.59	16.82	16.00	17.19	17.57
	3H	17.11	18.14	17.54	18.55	18.98	16.88	17.92	17.31	18.32	18.75
	4H	17.79	18.70	18.24	19.14	19.59	17.41	18.32	17.86	18.75	19.21
	6H	18.39	19.20	18.86	19.65	20.12	17.94	18.75	18.41	19.21	19.67
	8H	18.58	19.34	19.06	19.80	20.28	18.12	18.88	18.61	19.34	19.82
	12H	18.64	19.34	19.13	19.80	20.32	18.15	18.86	18.65	19.31	19.84
8H	4H	17.98	18.73	18.46	19.20	19.68	17.63	18.38	18.11	18.85	19.33
	6H	18.77	19.40	19.27	19.88	20.40	18.37	19.00	18.87	19.48	20.00
	8H	19.09	19.64	19.62	20.17	20.67	18.68	19.23	19.21	19.76	20.27
	12H	19.19	19.66	19.73	20.18	20.71	18.75	19.21	19.28	19.73	20.26
12H	4H	18.01	18.72	18.51	19.17	19.70	17.67	18.38	18.17	18.84	19.36
	6H	18.90	19.45	19.43	19.98	20.48	18.52	19.07	19.05	19.60	20.10
	8H	19.22	19.68	19.76	20.21	20.73	18.83	19.29	19.37	19.82	20.35
Variation with the observer position at spacings:											
S = 1.0H		0.3/-0.7					0.2/-0.7				
S = 1.5H		0.7/-1.2					0.7/-1.0				
S = 2.0H		1.5/-1.1					1.5/-1.1				
Standard tables:		BK3					BK3				
Uncorrected UGR		5.3					5.7				

UGR calculation is based on CIE Publ. 117 ,S/H = 0.25



Luminaire Lumens:

FL=246.13,FM=332.63,FH=79.39,FVH=8.55

BL=246.33,BM=334.92,BH=79.36,BVH=9.48

UL=1.19,UH=9.16

BUG Rating:B1-U1-G0

Intensity data(cd)

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	684.44	674.23	680.44	657.38	631.21	577.98	515.43	451.12	388.13
45.0	696.86	674.68	662.70	644.51	611.25	550.48	496.80	444.91	362.40
90.0	691.53	669.36	664.92	642.30	606.37	550.92	475.96	439.58	369.94
135.0	694.64	676.01	674.68	640.08	622.34	568.66	501.24	440.47	371.72
180.0	684.44	680.44	664.92	651.61	621.01	568.66	523.42	460.87	395.67
225.0	696.86	672.90	672.02	671.13	635.64	596.17	537.17	479.95	412.08
270.0	691.53	679.56	686.65	662.70	649.84	600.16	540.72	486.60	409.86
315.0	694.64	681.78	672.46	671.57	636.09	599.71	528.30	460.43	402.77
360.0	684.44	674.23	680.44	657.38	631.21	577.98	515.43	451.12	388.13
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	320.26	256.83	177.87	142.39	104.68	78.51	61.21	36.82	8.43
45.0	302.07	207.59	179.20	117.10	92.71	70.53	47.02	47.46	13.75
90.0	288.32	235.98	166.78	128.19	97.14	81.17	43.91	35.04	3.99
135.0	299.41	222.67	165.45	125.98	96.70	68.75	51.46	30.61	15.97
180.0	318.04	248.40	178.76	135.29	96.26	90.05	45.69	42.14	18.19
225.0	327.80	249.29	192.07	137.51	94.04	80.73	68.75	46.13	20.85
270.0	344.21	266.59	223.12	153.03	113.11	87.83	70.53	55.00	15.52
315.0	322.92	245.30	181.42	137.95	90.93	88.27	62.10	29.72	11.98
360.0	320.26	256.83	177.87	142.39	104.68	78.51	61.21	36.82	8.43
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	11.09	0.89	0.44	0.00	0.00	0.00	0.00	7.54	3.10
45.0	0.00	0.00	0.00	5.32	7.54	0.00	13.31	0.00	0.00
90.0	3.55	0.00	0.00	0.00	10.65	7.10	3.55	0.00	6.21
135.0	0.00	0.00	3.99	2.22	3.99	0.00	6.65	0.00	0.00
180.0	0.00	2.22	0.00	0.00	0.00	2.66	4.44	3.10	1.77
225.0	0.00	0.00	0.00	4.44	0.00	0.00	0.00	0.00	2.66
270.0	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315.0	0.00	3.10	3.55	0.00	0.00	2.66	0.00	5.77	1.33
360.0	11.09	0.89	0.44	0.00	0.00	0.00	0.00	7.54	3.10
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.00	0.00	9.76	0.00	0.00	0.00	1.77	0.00	0.00
45.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.99
90.0	7.10	6.65	0.00	0.00	2.66	4.88	0.89	0.00	0.00
135.0	0.44	0.00	3.99	0.00	0.00	0.00	0.00	2.22	0.00
180.0	8.43	0.00	0.00	0.00	0.00	0.00	11.53	1.33	2.22
225.0	0.00	0.00	0.00	0.00	0.00	2.22	0.00	0.00	0.00
270.0	0.00	5.77	0.00	2.22	1.77	0.00	0.00	0.00	0.00
315.0	2.22	0.00	0.00	2.22	3.99	0.00	0.00	0.00	2.66
360.0	0.00	0.00	9.76	0.00	0.00	0.00	1.77	0.00	0.00
C/γ(°)	180.0								
0.0	0.00								
45.0	13.31								
90.0	0.00								
135.0	0.00								
180.0	0.00								
225.0	13.31								
270.0	0.00								
315.0	0.00								
360.0	0.00								